

CORRESPONDENCE

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THE CIVIL AIR GUARD An Aircraft Constructor's Views

SIR KINGSLEY WOOD'S truly statesmanlike action in touching the imagination of the public has met with its natural response—many thousands already clamouring to avail themselves of a great opportunity.

This great scheme does not mean only that many thousands will actually fly; it means the stimulating of the inventive faculties and many other such important points which at first are overlooked; one in particular is that familiarity with the use of aircraft by a large number of young, technically minded people in this country will inevitably provide the supply of practical knowledge and experience of which the aircraft industry is experiencing such a shortage at the present time.

There are signs that those who find themselves temporarily overwhelmed by the demand to learn to fly are afraid that the British aircraft industry cannot meet the need which will later arise for machines. One already hears suggestions that foreign aircraft should be imported for this purpose.

As a manufacturer, I cannot state too emphatically that the British aircraft industry can meet the need for machines when it really arises. It is not true, and never has been true, that the manufacturer of civil aircraft is so preoccupied with military work that he cannot take on the manufacture of civil aircraft. The truth is that until Sir Kingsley Wood took this bold and imaginative step there was no demand for civil aircraft, and so for the moment their production is negligible.

There are in this country to-day many thousands of skilled workers in allied trades unemployed, and these men alone could produce all the civil aircraft which we need, and they could produce them in time to meet the real need of this new scheme.

Thus, in a very short time, that essential basis for export—i.e., a good home market—would be provided, and in the near future we should again see British civil aircraft active in the markets of the world.

The fact is overlooked that it will take many months to organise the present equipment so that it may be used effectively

(which is not the case at present; there are few machines being used for more than 25 per cent. of their possible capacity to-day), train the necessary instructors and take those essential steps in preliminary organisation which need to be taken.

My own company and other civil aircraft manufacturers (I am bold enough to speak for others) can have the necessary aircraft ready by the time these preliminary steps have been taken. But if, in a panic, we are to have foreign aircraft imported in advance of real requirements, then damage will be done which will be largely irreparable to the creation of an additional reserve of technical men and to an opportunity for the reduction of unemployment.

E. C. GORDON ENGLAND,
Managing Director,
General Aircraft, Ltd.

Hanworth.

SAILPLANE BLIND-FLYING

—and the Link Trainer

MR. PHILIP WILLS, the well-known glider pilot, in his interesting article on "Sailplane Cloud Flying," in your issue of July 14, infers that the Link Trainer would be useless for training glider pilots for cloud flying because it cannot induce the feeling of vertigo experienced in actual gliding in clouds.

I am not a glider pilot, so I cannot argue with him, but I would suggest he tries the Link Trainer to ascertain whether his inference is correct.

I can tell him that quite experienced pilots do obtain a feeling of vertigo when spinning in the Link Trainer; the realism of the effect on more than one individual has been so drastic as to cause them to smash up the controls in their endeavour to come out before hitting the ground.

Without any experience of gliding, I should judge that the Link Trainer is the ideal method of preparing oneself for an attempt on Wills' height record.

P. F. M. FELLOWES,
Air Commodore (retired).

London, W.1.

CLOUD-BASE HEIGHT at a GLANCE

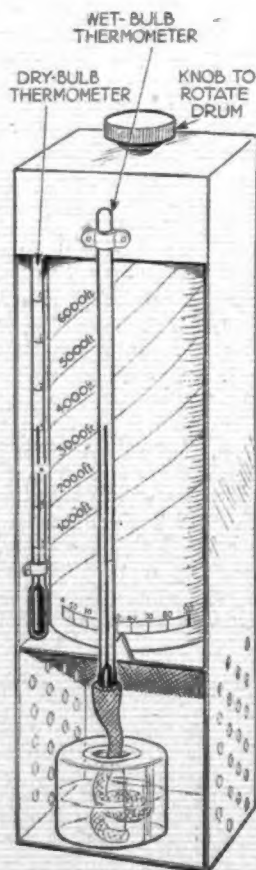
THE desirability of a simple instrument for measuring immediate cloud-base height, to supplant the present rather elaborate methods, is obvious. Thus there is unusual interest in a neat little device which we found hanging modestly alongside a back door of the London Gliding Club's establishment at Dunstable during the National Gliding Contests.

Enquiries elicited the fact that it was the invention of Mr. J. S. Fox, who is a sailplane pilot of very considerable experience (he has held a number of records, including a share in the then world's two-seater record of 10 hours with Flt. Lt. Murray in Germany last year; a British distance record of 145 miles; and best individual flight—96 miles to a declared goal—at the recent Contests). It was Mr. Fox's interest in meteorology which led him to take up gliding seriously in 1934.

The beauty of his "cloud-base recorder" lies in its absolute simplicity; it is obviously as fool-proof as any scientific instrument could possibly be.

Three years ago the inventor made his first real "thermal" flight in a sailplane. This flight was started under a clear blue sky, but when it had reached a height of about 4,000ft., wisps of cloud started condensing all round the sailplane as it soared on upwards. The pilot began to wonder why this phenomenon should occur at 4,000ft., instead of at, say, 3,000ft., or at any other height.

The air in the thermal, he reasoned, had obviously come up with the sailplane from the ground. It therefore seemed possible that, by testing the condition and humidity of the air at ground level, one might be able to calculate how high such air would have to rise in order to cool sufficiently for cloud-condensation to take place. This idea he first worked out theoretically for every possible type of day, and the last two years have



The Fox cloud-base recorder.

been spent in making as many practical tests as possible during actual soaring flights.

The instrument consists fundamentally of an ordinary wet-bulb and dry-bulb hygrometer, for measuring the humidity of the air before it starts upward on its cloud-forming journey. The *modus operandi* is simplicity itself. One reads the ordinary temperature on the dry-bulb thermometer, seen on the left-hand side of the sketch. If this is, say, 60 deg., one rotates the central drum until the pointer at its foot comes in line with the corresponding 60 deg. mark on the scale behind it. The height of cloud-base is then read off from the height of the mercury in the central (wet-bulb) thermometer against the diagonal lines on the drum.

It was originally imagined that the instrument would be serviceable only on such days as were good for the soaring pilot, i.e., those with strong up-currents; but subsequent experiments, it is stated, have proved that it is also reasonably reliable on almost every kind of day. The assumption is, therefore, that all low cloud is formed by rising air, even though this air may ascend far too slowly to be noticeable even in a light sailplane.

At Dunstable, as quite a number of people could witness, the instrument gave surprising results. Not only did it register accurately, to within a hundred feet or so, the actual height at which low cloud was encountered by the aeroplanes and sailplanes which were flying at the time, but also, on one day when the clouds suddenly lifted from about 1,800ft. to 3,000ft., this uncanny little device accurately prophesied this change, going up from one reading to the higher one within a matter of only ten minutes or so.

We understand that it is protected by a provisional patent, and that it is soon to be marketed by Negretti and Zambra, 38, Holborn Viaduct, London, E.C.1.